

SPECIFICATION NO. SGC-101  
ACCOMPANYING ORDER NY-614  
LAMP BLACK FILTER

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SEATTLE GAS COMPANY  
LAKE STATION - 1945 EXTENSION

EBASCO SERVICES INCORPORATED  
Design and Construction Division  
New York, N Y  
September 5, 1945  
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USEPA SF



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LAMP BLACK FILTER

This specification covers the general technical requirements and essential particulars of a complete Filter unit furnished and delivered, and demonstrated capable of performing in commercial operation, continuously and satisfactorily in a manner acceptable to the purchaser and in accordance with guarantees stated herein.

GENERAL

The filter unit covered by these specifications will be installed in the Lake Station of the Seattle Gas Company at Seattle, Washington.

LOCATION

Motors furnished shall be in accordance with specification Ebasco 8-36 revised 1941, Motors for Auxiliary Service. Motor Starters will be furnished by Purchaser.

MOTORS

The filter shall be supplied with a carbon sludge and water mixture containing not less than 10% carbon sludge and floating lamp black (by weight). The filter shall have a delivery capacity of 5 tons/hr Carbon (dry basis) containing not more than 30% moisture (by wt) when using press rolls and press belt.

CAPACITY

The equipment to be furnished under these specifications will consist of:

EQUIPMENT  
FURNISHED

Item 1 - one 6 ft diameter by 6 ft face Oliver Filter with approximately 113 sq ft of filtering area with the following specifications:

- a. Cast iron tank with necessary drain and overflow connections
- b. Single pin suspension agitator with overhead pin carried on roll arcs permitting agitator to be removed without disturbing drum. Agitator arcs of tubular steel construction. Rakes of heavy steel angle. Agitator driver by separate motor and gear reducer.

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- c. Drum with closed cast iron head and cast iron drum shell with 21-1/2" drive and rear trunnions, cast iron screen bolted to cast iron drum shell. Screen hand ground after being machine ground to remove sharp edges. Cover furnished complete with cotton under cover, and Acme bonds.
  - d. Variable speed drum drive with U S vertical unit direct connected to filter worm shaft.
  - e. 21-1/2" cast iron valve with single 10" filtrate connection, necessary air blow connection, and flexible connection for filtrate pipe.
  - f. Reciprocating cover cleaning shower driver from rear trunnion.
  - g. One set of press roll and press belt.
  - h. Cast iron discharge scraper
  - j. Monzel forced feed lubricator driver from worm shaft for lubricating main bearings, agitator pins and automatic valve.
  - k. Blow timer driven from worm shaft for timing air blow to discharge filter cake.
  - l. Motors for driving filter (7-1/2 hp) and agitator (2 hp) per Ebasco specifications
- Item 2    One (1) steel filtrate receiver, welded construction, 45" x 72" with 10" connections and supporting lugs
- Item 3    One (1) steel moisture trap, welded construction, 45" x 72" with 10" connections and supporting lugs.
- Item 4    One (1) Oliver centrifugal filtrate pump, size 4", cast iron construction direct connected to 7-1/2 hp motor and all mounted on cast iron sub-base
- Item 5    One (1) Ingersoll-Rand Co vacuum pump, size

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22" x 9", with V-belt drive, 50 hp motor with sliding rail base, foundation belts, and complete set of wrenches.

The filter and auxiliaries will be installed on foundations HOUSING to be provided by the purchaser. A roof will be erected over the filter and pump auxiliaries, but the building will be provided with outside walls.

The seller guarantees the equipment which he furnished under GUARANTEE these specifications as follows:

1. The filter will be capable of delivering continuously 5 ton/hr of filtered carbon (dry basis) containing not more than 30% moisture by weight, when supplied with sufficient quantity of carbon sludge water mixture containing not less than 10% carbon sludge and lamp black (by wt) when using press roll and press belt.

2. The filtrate pump will have sufficient capacity to form a satisfactory filter coke, and to insure guaranteed capacity of the Filter Unit.

4. No motor will be overloaded at any point on the load capacity curve of the driven equipment.

Seller shall supply preliminary drawing of all equipment DRAWINGS to be furnished within one week after receipt of order, and certified drawings within three weeks of receipt of order.